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Chairman: Mr. de ROJAS (Venezuela)

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The meeting was called to order at 10.15 a.m.

AGENDA ITEM 95: MACROECONOMIC POLICY QUESTIONS:

(c) SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (A/52/320)

1. Ms. BRANDWAYN (United Nations Conference on Trade and Development (UNCTAD)) observed that the new world order driven by technological advance, trade liberalization and globalized production offered opportunities to all, but that developed and developing countries were unevenly positioned to take advantage of them. There was a potential danger that structurally weak economies might, without the acquisition of technological capability, especially in the new information and communications technologies, become marginalized, or excluded altogether, from the competitive new system.

2. The decision of the Commission on Science and Technology for Development to focus, during the inter-sessional period 1995-1997, on information technology and its impact on developing countries was therefore timely. Little was currently known about what threat that technology posed to such countries, or how it could best be applied as a tool for development and integration. Yet the information revolution was a reality from which no one, not even small and low-income economies could escape; fortunately a number of United Nations agencies had begun to address the critical question of the international community's role in facilitating access to the new technologies by developing countries and countries in transition, and in making the technologies work for development.

3. The science, technology and innovation policy reviews, another important activity of the Commission and of UNCTAD, encouraged international cooperation in ensuring better design and application of such national policies and fostered the improvement of local industries.

4. The ninth session of UNCTAD had recently reaffirmed the importance of the partnership between the public and private sectors in mobilizing resources for sustained economic development. Accordingly, UNCTAD and the Commission would in the coming biennium focus on both North-South and South-South science and technology partnerships and networks for capacity-building, with particular attention to biotechnology and food production.

5. Mr. KISIRI (United Republic of Tanzania), speaking on behalf of the Group of 77 and China, said that science and technology were critical to the advancement of developing countries in the contemporary era of globalization and liberalization. Greater international cooperation was needed to enhance domestic capacity-building and to promote and finance the developing countries' access to environmentally sound technologies, and the transfer of such technology to them on favourable and concessional or preferential terms. It was imperative, in particular, to address the problem of restrictions on the export of new technology to developing countries.

6. The developing countries remained marginalized in the process of globalization: global payments of fees and royalties - which went essentially

to a handful of developed countries - exceeded the combined export earnings of all the least developed countries by billions of dollars. The United Nations must continue to make the issue of science and technology for development a priority.

7. Efforts by the developing countries to achieve sustainable development would be effective only if combined with efforts to accelerate economic growth and encourage trade, finance, transfer of technology and the resolution of external indebtedness. In that regard, external assistance was essential to expand transfer of technology and trade and investment among developing countries.

8. The Committee should assess the progress being made by the Commission on Science and Technology in achieving the aims of General Assembly resolution 50/101 and in accomplishing the various activities outlined in document A/52/320. The Committee itself should continue to be guided in its work by the Vienna Programme of Action on Science and Technology for Development and other relevant United Nations resolutions. The Commission, in its role as a global forum for the examination of science and technology issues, for improving the understanding of policies in that area and for formulating recommendations and guidelines within the United Nations system, should sharpen its focus on the transfer of technology and on capacity-building in developing countries. With the needed political will and with specific cooperation arrangements, a more rapid transfer of technology to the South was certainly a feasible goal.

9. Mr TCHOULKOV (Russian Federation) said that science and technology were fundamental to the global economy, and also posed a whole complex of new global challenges, both political and scientific, relating to the protection of intellectual property, mechanisms of transfer and marketing of technologies. The United Nations should play a greater role in the establishment and operation of a global information network that would include virtual laboratories, telemedicine and electronic trading; and in research into environmental degradation, climate change and the development of a new generation of environmentally safe technologies in the energy, transport and similar areas.

10. His delegation supported the Commission's decision to concentrate in the coming biennium on science and technology partnerships and networking for national capacity-building, and believed that it should focus, in particular, not only on biotechnology and sustainable energy systems but also on environmentally safe transport in order to lower emissions of greenhouse gases. The Commission's Working Group on information and communications technology should establish closer contacts with the relevant working group of the Economic and Social Council, in order to develop the information management strategy within the United Nations system called for at the latest session of the Council.

11. The Russian Federation supported the idea of creating a United Nations electronic information subsystem in the field of science and technology on the Internet Worldwide Web. It endorsed the decision to call for an independent study which would be considered at the next session of the Commission on new forms of resource generation, with particular attention to information and

communications technologies, and supported the science, technology and innovation policy reviews the Commission was undertaking, which could include, inter alia, regulatory and legal questions, new funding mechanisms and contract practices.

12. The Russian Federation believed that the Commission should retain its autonomy within the Economic and Social Council, rather than being put under the aegis of UNCTAD. There should, however, be a closer linkage between the activities of the Commission on Science and Technology for Development and the Commission on Sustainable Development.

13. Ms. AMOAH (Ghana) said that the progress of developing countries depended to a large extent on their access to technology and their own capacity to develop it, since science and technology were crucial to social and economic development and to an integrated approach to environmental problems, cutting across a wide range of fields and seriously affecting the structures of national economies and the role they played in globalization and liberalization. Yet many developing countries lacked the needed capability and the financial resources to acquire it. They needed assistance in training suitable manpower, carrying on innovative research and building capacity in terms of institutions and infrastructure. They must also be helped to benefit from the rapid advances in the information and communications technology that had such an influence on the global economy.

14. The greatest challenge facing humanity was to ensure that the unprecedented prosperity and technological advances were used to eradicate social ills and to provide social and economic development for all, while protecting the environment. Every effort should therefore be made to facilitate the developing countries' access to environmentally sound and economically viable technology and to its transfer, adaptation and development, on concessional and preferential terms. The United Nations must make that one of its priorities.

15. Any body mandated to deal with such a cross-sectoral issue as science and technology for development must be able to address it in a comprehensive and integrated manner and be empowered to help coordinate such activities within the United Nations system. The Committee should bear that in mind in its proposals for such a body.

16. Mr. CALDAS de MOURA (Brazil) said that the international community must promote access to and transfer of technology to developing countries on favourable terms. The United Nations must therefore give the highest priority to the mobilization of resources, sharing of information and experiences, especially through economic and technical cooperation and transfer of technology.

17. It was also crucial to develop a genuine partnership between the public and private sectors as well as effective forms of cooperation between those sectors in developing and developed countries. In that regard, Governments had an important role to play, mainly by establishing regulatory measures and fiscal incentives for investments in research and development, and that role must be reinforced through international cooperation. The creation of an enabling

environment must be pursued at the national and international levels both by technology recipients and technology suppliers.

18. In that context, the role of international organizations should be to prepare technology needs assessments and to identify barriers to the transfer of technology. Recalling that the Commission on Science and Technology for Development had been invited to give consideration to ways and means to formulate a common vision for the future contribution of science and technology for development, he said that his delegation concurred with the four main themes identified in paragraph 18 of the Secretary-General's report (A/52/320).

19. Brazil had already developed a rather comprehensive policy and regulatory framework to promote science and technology. The creation of a nationwide information and research commercial network, which was also connected to the Latin American Network for Technological Information was an example of coordinated efforts by Government and the private sector. The Brazilian experience in the area of science and technology was already considered as an innovative example for other developing countries. Indeed, his country had been invited by the World Bank to join the board of its Information for Development Programme (INFODEV). The United Nations must strive to find ways and means to implement a genuine partnership between North and South, the private and public sectors.

20. Ms. ALVA (India) said that the accelerated pace of global technological innovation had created a new global economic environment where technology had become the key determinant to competitiveness. Consequently, developing countries could no longer rely on their static resource endowments and low labour and factor costs to lead them to sustained growth and development. The creation of comparative advantage based on the use of science and technology had become a crucial factor in development policy.

21. India's efforts in the sphere of science and technology were directed at improving the quality of science and technology education and training at all levels; ensuring, through fiscal incentives, that research was carried out by and within the production and service sectors; accelerating the process of commercialization of research to induce better links between research and industry; encouraging research and innovation in the techniques of traditional occupations; and giving priority to implementation of programmes in the socio-economic sector which had the most direct impact on the poorest people.

22. However, those efforts clearly needed to be complemented by international regulations that took into account the need for access to a broad spectrum of state-of-the-art technology. It was a matter of serious concern that current regulations on globalization had increased the cost of technology transfer to developing countries through intellectual property rights regimes. It was estimated that global payments of fees and royalties for technology had amounted to $48 billion for the period 1993-1997; that exceeded the combined total value of exports of all least developed countries for the same period. Developed countries increasingly faced obstacles in accessing technology, as export restrictions on technology were being put in place by exclusive clubs of technology owners. Such technology denial regimes must be effectively addressed

because access to technology on reasonable terms determined whether countries could take advantage of the opportunities that globalization offered.

23. There was also a growing recognition that discussions of the terms and access issues needed to be effectively broadened to include skills, know-how and related organizational and institutional arrangements. India supported consistent, long-term and effective deliberation and follow-up action by the United Nations in the area of science and technology because it was imperative that that issue, which was a crucial determinant of development, should be reflected as a cross-cutting concern in the Organization's work. It would be useful to maintain the intergovernmental role of the Commission on Science and Technology for Development and to strengthen it. India also supported the enhanced integration of ECDC and TCDC modalities as a viable means of enhancing the transfer of appropriate technology to the South.

24. Mr. PRENDERGAST (Jamaica) said that science and technology were crucial to the economic development and social resuscitation of many developing countries which were vigorously pursuing efforts, in the context of harsh economic realities, to strengthen their technological capacities. His Government believed that the process of building comparative advantage was based on the systemic application of science and technology know-how and saw information technology as an essential element in strategies for applying science and technology.

25. International cooperation was essential. Indeed, without the explicit and vigilant attention by development agencies and the donor community and their Government counterparts in the recipient countries, the information highway would not reach groups such as school children, the handicapped, girls and women and the two thirds of the world's population that did not have access to a telephone. In short, information and communications technologies were tools of empowerment that could generate employment and open avenues of investment.

26. UNCTAD and the Commission on Science and Technology for Development had played critical roles in facilitating exchanges, discussions and research in that area. In that regard, developing countries had benefited considerably from the science, technology and innovation policy reviews.

27. Mr. REVA (Ukraine) supported the view that the critical challenge facing most of the developing countries and those in transition was how to access and avail themselves of the development benefits of information and communications technology, notwithstanding the underdevelopment of their technological capability, skill capacity and supporting infrastructure (A/52/320/para. 4). While the quality of United Nations programmes in the field of science and technology for development had improved, the question of how to bridge the gap between those countries that generated and utilized new scientific ideas and modern technologies, and those countries which were unable to do so remained one of the major challenges facing the international community.

28. In that connection, his delegation attached particular importance to the efforts of the Commission on Science and Technology for Development aimed at strengthening cooperation with other United Nations bodies and specialized agencies. He praised the work of the Commission during its 1995-1997

inter-sessional period, in particular its review of the role of information and communications technologies and its Working Group's preparation of policy recommendations and guidelines for the strengthening of national strategies. His delegation also welcomed the Commission's joint activities with UNCTAD and other relevant organizations. Information on the Commission's activities should be provided not only to Governments but also to non-governmental organizations, academic circles and the private sector in order to expand their role in the implementation of its recommendations.

29. His delegation supported the proposal concerning the preparation of analytical materials and appropriate recommendations aimed at enhancing the effectiveness of the United Nations bodies dealing with science and technology for development, and welcomed the Commission's timely consideration, at its third session, of information technologies and their impact on development, in particular, the creation of a global information network. It supported the Commission's recommendation that developing countries and economies in transition should elaborate their own national strategies for the development and application of information and communication technologies. In that connection, it attached particular importance to the creation of an Internet database for the Commission, containing information on scientific and technological policies and respective national strategies to achieve sustainable development and ecologically sound energy systems. All countries concerned, including those with economies in transition, must be guaranteed access to the network and provided with the necessary technical support.

30. His delegation welcomed the Commission's study of the scientific and technical aspects of the conversion of the military industry. The application of international experience in the field of military technologies to the creation of a global information network would be extremely valuable. Such activities should be undertaken in cooperation with the World Bank and other interested agencies of the United Nations system. In that context, his delegation supported the Commission's recommendations that organizations, funds, and private entrepreneurs to facilitate the process of direct foreign investment for the elaboration of modern technologies in countries with economies in transition. Such cooperation was particularly meaningful to Ukraine in view of its commitment to decommissioning the Chernobyl nuclear power plant by the year 2000. In conclusion, support by the international community would help to stabilize the development of Ukraine and other countries in transition.

31. Ms. DONG Guilan (China) said that her delegation supported the decision of the Commission on Science and Technology for Development to make science and technology partnerships and networking for national capacity-building a priority theme during the inter-sessional period 1997-1999. She hoped that the Commission would continue to play an important role in enhancing the decision-making capability of developing countries in science and technology. The Commission should also make sure that the findings of its research projects were better applied and disseminated. The United Nations should support the Commission, particularly by giving it the financial support it required in order to fully play its role.

32. Science and technology was a dynamic productive factor capable of transforming entire societies, yet the extremely vital issue of science and technology for development had not been given the importance it deserved in the United Nations system. Her delegation was particularly concerned about the current tendency to weaken agencies in the field of science and technology.

33. Peace and development, the two major issues currently facing mankind, were interdependent. The strength, wealth and prosperity of any nation were closely linked to a peaceful environment and progress in science and technology. She hoped that in the course of reforming the United Nations, the tendency of giving priority to peacekeeping while neglecting development and science and technology would be redressed through concrete actions aimed at strengthening the work of science and technology for development.

34. China attached importance to the application of science and technology in the process of economic development. Financing for science and technology in China had been increasing at an annual rate of 15 per cent since 1985. Science and technology advancement had effectively boosted economic growth in China, as demonstrated by the fact that the gross domestic product had grown at an annual rate of 12.1 per cent from 1992 to 1996. In 1995 China had formulated a strategic plan designed to rely on the expansion of education and the advancement of science and technology for the realization of sustained economic growth and social progress.

35. Mr. HAMAD (Observer for the United Nations Educational, Scientific and Cultural Organization (UNESCO)) said that the Director-General of UNESCO intended to convene, in 1999, the World Science Conference with the joint sponsorship of the International Council of Scientific Unions.

36. The main objectives of the Conference would be to undertake an in-depth analysis of the principal achievements of science and its shortcomings; contribute towards harmonizing the complex relations between science, society, development and the environment, and promoting high ethical standards in scientific research and its applications; promote the development of science, with particular attention to the needs of developing countries, enhancing the interaction between scientists, public and private sectors and society; foster the renewal of international cooperation in the sharing of scientific knowledge in the age of information technologies and give a new impetus to science and its applications in the service of development, environmental protection, and the building of a culture of peace; and engender the renovation of scientific education.

37. The main outcome of the Conference was expected to be a worldwide innovative and pragmatic programme of action which would foster partnerships in science and the use of science for development and the environment. That programme would be a framework for promoting cooperation and the coordination of efforts of governmental, intergovernmental and non-governmental bodies, the industrial sector and the scientific community.

38. Mr. ZARIE-ZARE (Islamic Republic of Iran) noted that the integration of developing countries into the world economy had increased, the developed countries' import of labour-intensive and manufactured goods, and their exports

of high-technology and service-intensive products to developing countries. In the process, information and communication technologies had become more widespread, which had had an impact on trade, investment and the management of financial markets. Nonetheless, as indicated in the report of the Secretary-General (A/52/320, para. 4), access to and application of information and communications technologies and ability to exploit their development potentialities could not be taken for granted in the case of developing countries. His delegation agreed with the conclusion of the Working Group on information and communications technology that, although the costs of building national information infrastructure were high, the costs of not doing so would certainly be much higher.

39. Implementation of the recommendations of the major international conferences of the 1990s called for, inter alia, the transfer of technology from developed to developing countries. Developed countries had not fulfilled their commitments in that regard and developing countries lacked the capacity to design such technologies. As indicated in the report of the Secretary-General, their science and technology institutions were fragmented, uncoordinated and poorly adapted to meeting local industry's needs (A/52/320, para. 9). International cooperation in the field of science and technology for development was therefore a vital complement to the technological capacity-building of developing countries. The United Nations system was the main forum for promoting such cooperation through its intergovernmental machinery, particularly the Commission on Science and Technology for Development and UNCTAD.

40. The Vienna Programme of Action on Science and Technology for Development and other relevant United Nations resolutions must be implemented faithfully. The twentieth anniversary of the Vienna Conference provide an opportunity to appraise efforts to that end. In that connection he drew attention to the guidelines proposed by the Working Group on Information and Communications Technology and stressed the need for cooperation between international and intergovernmental bodies. In conclusion, he called for a halt to the policy of certain developed countries of restricting the transfer of certain technologies to developing countries under various pretexts.

41. Mr. KEREM (Israel) said that Israel's experience might be useful in the process of capacity-building for science and technological development called for in General Assembly resolution 50/101 (para. 2).

42. Israel had always valued education and knowledge, which were indispensable to nation-building. Well over half of all Israelis in their early twenties were enrolled in higher education, approximately 40 per cent of them in applied sciences, and, 70 per cent of the national education budget was provided from public funds. Moreover, convinced that the Government had a vital supporting role to play, Israel allocated 2.2 per cent of its gross domestic product to research and development. As a result of its stress on education and research, it was a world leader in science and engineering and in communications and information technology.

43. The Government also established linkages between education and production. It had launched an "incubator" programme, in which the Government essentially

financed the operating budget of fledgling companies for two years until they could develop a product and make it commercially viable. More than 50 per cent of the incubator projects completed in 1996 were now operating independently and nearly half were producing a viable product. More than 600 scientists and technicians had received assistance under the programme. Clearly, such a programme could be useful for the development of appropriate technologies and could be applied in developing economies. University science parks, where the Government and the university assisted with the initial plant, development and operating costs, were another way of developing laboratory experiments for the market place. Such parks existed on most Israeli campuses.

44. In the belief that government direction was essential, Israel had created the post of Chief Scientist in its Ministry of Industry and Trade. The Chief Scientist was responsible for implementing the Law for the Encouragement of Industrial Research and Development, aimed at fostering the development of local, technologically oriented industry, improving the country's balance of trade by increasing the manufacture and export of high-technology products, reducing reliance on high-technology imports and creating jobs in industry. Under the Law, grants covering from 30 to 60 per cent of the estimated cost of research and development were also available.

45. Israel was forming alliances with other countries, particularly in the area of government support for research and development. As members of the Binational Industrial Research and Development Foundation (BIRD), Israel and the United States shared the cost of developing new high-technology products. Similar research and development agreements existed with a number of European countries and with India, Canada and Singapore.

46. The Israeli economy was export-driven. Israel had entered into free trade agreements with the United States of America, Canada, the European Free Trade Association, the European Union, Turkey, the Czech Republic and Slovakia. Those agreements served as trade bridges between Israel and its partners and had stimulated foreign investment.

47. While government had an essential role to play in the start-up phase, the provision of venture capital by the private sector was equally important. Recently, 65 venture capital funds had been created in Israel in support of new business development, benefiting such firms as Digital, IBM, Hewlett Packard, Intel and MicroSoft. As a result of its industrial revolution, Israel was also active in international Internet developments and had an active Internet user population. In conclusion, he suggested that international bodies such as the Commission on Science and Technology for Development should explore some of the successful approaches taken by Israel.

48. Mr. Raekwon CHUNG (Republic of Korea) said that his Government was currently conducting a feasibility study on the role of publicly funded and publicly owned technologies in the transfer of environmentally sound technologies. The study was being conducted jointly with UNCTAD, the Commission on Sustainable Development and the United Nations Environment Programme. The underlying idea was that government-sponsored or government-funded research and technology could be transferred to developing countries more easily than privately owned commercial technology.

49. Since, government-funding accounted for 36 per cent of total national spending on research and development activities in the countries that were members of the organization for Economic Cooperation and Development (39 per cent in the European Union and the United States of America), the potential benefits could be considerable. Ten countries, including Germany, India, Japan, the Republic of Korea and the United States of America, were currently conducting country case studies. An inter-sessional expert meeting of the Commission on Sustainable Development would review the results of the feasibility study in February 1998 and report thereon.

50. Possible outcomes of the study might include the establishment of an environmentally sound technology bank in which governments pooled their patents in that area and the transfer of technology not only from developed to developing countries but also among developed and developing countries, respectively, since many developing countries, including India, also provided funding for technology development and held patents. A multilateral mechanism would facilitate the process of government-owned technologies.

The meeting rose at 11.50 a.m.